Exhibit A
Scope of Work
and
Specifications

Bid Log Number 2008-01A

Bolsa Chica Lowlands Maintenance Dredging Project

Please go to

http://www.slc.ca.gov/Misc_Pages/Contracting_Opportunities_Home_Page.html

for this exhibit and all drawings

State of California
California State Lands Commission
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PART 1 – GENERAL

1.1 BID ITEMS LIST

Item No. 1 – Mobilization and Demobilization

Provide all labor, materials, equipment and plant as may be necessary to mobilize and demobilize construction operations utilizing an electric or diesel dredge for the project, for the lump sum price of: (NOTE: Mobilization limited to 10% of total bid. Demobilization limited to 5% of total bid).

$_____
Lump Sum

Item No. 2 – Dredging and Placement of Sand

Provide all labor, materials, tools, equipment and incidentals and doing all work as may be necessary to provide earthwork and dredging utilizing an electrical or diesel dredge; including excavation, dredging, transporting, beach placement, measuring, filling, and final grading , for unit price per cubic meter of:

230,000 cubic meters x $ _____/m^3 = $_____
Total Price

1.2 LUMP SUM DETAILED WORK ITEM SCHEDULE

A. Items for which quantities are indicated as Lump Sum shall be paid for at the price indicated in the bid. Such payment will be considered as full compensation for the items of work, including all appurtenant and peripheral work required to furnish the work complete in place as indicated on the Plans and as specified.

B. The Contractor to whom the project is awarded shall, within 15 days after award of the contract, submit a detailed work breakdown schedule, including item description, unit price, quantity and extended total for each lump sum item in the bid with the exception of those items where the detailed breakdown is furnished and attached to this Section. Contractor developed breakdown schedules shall be in a format similar to those provided with this Section.

C. The Contractor shall fill in all the blank spaces in the breakdown schedules which he will be providing.

D. The sum of all items in the detailed breakdown schedule shall be the same as the total bid for the lump sum item.

E. The detail prices in the breakdown schedule will be used to determine the value of changes and the allowable progress payments.

F. Contractor developed detailed breakdown schedules will not be effective until approved. Allow 10 days for approval.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

PART 1 – GENERAL

1.1 WORK INCLUDED

A. The work of this Section consists, in general, of furnishing transportation, labor, materials, equipment, and incidentals necessary to perform the work including but not limited to the following:

1. Secure necessary permits as specified in Section 01575, "Temporary Environmental Controls."
2. Dredging and Placement as specified in Section 02325, "Earthwork/Dredging".
3. Site cleaning and removal of debris, equipment, and excess material upon completion of work.
4. Incidental work as shown on Drawings, specified or directed by the Engineer.

1.2 WORK BY OTHERS

Not Applicable

1.3 DEFINITIONS

A. Oil Company - AERA

B. Contractor - Construction Contractor

C. Owner - California State Lands Commission (CSLC)

D. Engineer - On Site Representative of the CSLC

1.4 TIME OF COMPLETION AND LIQUIDATED DAMAGES

A. The total time for completion will be 150 calendar days from the Notice to Proceed (NTP), not to exceed March 15, 2009.

B. There will be liquidated damages assessed as follows:

1. For each day beyond 21 calendar days from NTP the dredging plan, schedule, and initial hydrographic survey are delayed, $1000 dollars will be assessed.
2. For each day beyond 60 calendar days from NTP the dredging is delayed, $2,000 dollars will be assessed.
3. Liquidated damages shall be concurrent.

B. This provision specified the procedure for determination of time extensions for unusually severe weather. In order for the Engineer to award a time extension the following conditions must be satisfied:

1. The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.
2. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

The following schedule of monthly anticipated adverse weather delays is based upon National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations, The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICPATED ADVERSE WEATHER DAYS
Work Days Based on Five (5) Day Work Week

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
5	4	3	1	0	0	0	0	0	0	1	3

Upon acknowledgement of the Notice to Proceed and continuing throughout the contract, the Contractor will record on the daily QC report, the occurrence of adverse weather delays-days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled workday. The number of actual –adverse weather days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated, the Engineer will convert any qualifying days to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification.

PART 2 – PRODUCTS

Not Applicable

PART 3 – EXECUTION

Not Applicable

PART 4 – MEASUREMENT & PAYMENT

4.1 MEASUREMENT

A. The work of this Section is included in other Sections of work and is therefore not measured individually.

4.2 PAYMENT

A. Full compensation for providing all the labor, materials, tools, equipment and incidentals and for doing all the work involved in this Section will be considered as included in the prices bid for the various related items of work and no separate payment will be made therefor.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The work of this Section consists, in general, of furnishing all labor, materials, tools, equipment, and incidentals complete and in place as indicated on the Drawings and as specified and doing all the work involved in complying with permit restrictions.

1.2 SUBMITTALS

A. The following shall be submitted in accordance with Section 01330, "Submittal Procedures"

1. Preconstruction Submittals:
   Parking and Field Office Placement
   Contractor Regulations
   Oil Field Safety Instruction Plan
   Watercraft List (equipment used for materials or personnel transport)
   Samples (as specified in other Sections)
   Transportation Plan/ Traffic Control Plan
   Construction Practices and Safety Measures
   Best Management Practices
   Local Mariner's Notification
   Cultural Resources Monitoring Plan
   Air Quality Conformity Determination and Local/Regional Air Permits
   Fugitive Dust Mitigation Plan

1.3 SPECIAL SCHEDULING REQUIREMENTS

A. Have materials, equipment, and personnel required to perform each segment of the work at the site prior to the commencement of the work. Mobilization includes the delivery and assembly of the dredge.

B. The Pacific Coast Highway, Bolsa State Beach, City of Huntington Beach, and adjacent Oil Company facilities will remain in operation during the entire construction period. The Contractor shall conduct his operations so as to cause the least possible interference with normal operations of these activities, including oil spill simulations exercises.

C. Permission to interrupt any site traffic, State Park, City of Huntington Beach or Oil Company operations or utility service shall be requested in writing a minimum of 15 calendar days prior to the desired date of interruption.

D. The work under this contract requires special attention to the scheduling and conduct of the work in connection with existing operations and public convenience. Identify on the construction schedule each factor which constitutes a potential interruption to these activities.

1.4 CONTRACTOR ACCESS AND USE OF PREMISES

A. Site Requirements

Ensure that Contractor personnel employed on the work are familiar with and obey regulations including safety, fire, traffic and security regulations. Keep within the limits of the work and avenues of ingress and egress. The Contractor's equipment shall be conspicuously marked for identification.

B. Special Requirements for Work Within AERA Boundaries

Before beginning any work, Contractor must ensure that all Contractor employees have read, understand and comply with the AERA Contractor Safety Handbook. Each Contractor must validate that every worker has read and understands the handbook. Contractor is responsible to keep records available for periodic audit by Engineer. Additionally, a log must be kept at each job site office listing the names of all employees who have met this requirement. The Engineer representative must be told about new employees at the job site at the start of each day.

Safety rules in the handbook are basic and general in nature and cannot cover every working condition. Additional local rules and procedures will apply in certain circumstances.

Before starting any work, Contractor must show all employees the AERA provided videotape. The video explains safety policies for the project site and basic work rules. The video also explains hazards Contractor’s employees may encounter on the site. Contractor must train its workers on all applicable hazards.

Contractor must give an AERA provided test to each employee after the employee views the videos. Each worker must pass the test before he or she starts work. Each Contractor employee is accountable for his of her own safety and the safety of others in the workplace.

C. DMV Employer Pull Notice Program

Contractor employees who operate vehicles or heavy equipment on the project must have a valid driver’s license. Contractor should have a management system to ensure that this requirement is met. Contractor could meet the requirement by using the State of California Department of Motor Vehicles Employer Pull Notice

Program. The program is offered to any employer interested in identifying an employee (driver):

1. Whose license has been revoked; or
2. Who does not have a current driver's license (Class 1/A, 2/B, 3/C)

For a fee, the Department of Motor Vehicles will issue a driving record printout for each employee. The DMV will automatically generate a driving record report at least every 6 to 12 months for each employee. The DMV will use the report to identify employees who do not have a current and valid driver's license.

Regardless of the system used, Contractor must not allow employees to operate a motor vehicle on the project until they can prove they have a valid driver's license.

D. Accident Reporting

Contractor is required to immediately report any and ALL accidents that occur on the project to the Engineer's representative who is supervising the work. Contractor is required to submit a written accident report to the Engineer's representative within 24 hours of the accident.

E. Working Hours

If a diesel dredge is to be used, operations shall be restricted to 9 hours a day and no dredging shall be performed between the hours of 10 p.m. and 7 a.m. or on Sundays or federal holidays within 700 feet of any residential units. There are no limits on working hours for electrical dredging except as cited in the permits.

During periods of darkness, the different parts of the work shall be lighted in a manner approved by the Engineer. Make utility cutovers after normal working hours or on Saturdays, Sundays, and holidays unless directed otherwise. Keep the site perimeter secure at all times. Provide temporary closures as required to maintain security as directed by the Engineer

1.5 SECURITY REQUIREMENTS

A. Parking

Do not park on or block the site entrances or transit routes at any time. On-site parking will be allowed only within the designated staging areas, the Contractor's work zone on the beach or other areas as designated by agreement with the Engineer. Parking of private vehicles within these areas will only be allowed during approved hours of work. Parking in the eastern State Beach Parking lot

will only be allowed for workers engaged in activities related to the inlet and State Beach improvements and only during approved hours of work. Any required payment for parking will be the responsibility of the contractor.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

PART 4 – MEASUREMENT & PAYMENTS

4.1 MEASUREMENT

A. The work of this Section is included in other Sections of work and is therefore not measured individually.

4.2 PAYMENT

A. Full compensation for providing all the labor, materials, tools, equipment and incidentals and for doing all the work involved in this Section will be considered as included in the prices bid for the various related items of work and no separate payment will be made.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The work of this section consists, in general, of conforming to the various requirements specified.

1.2 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

15 CFR 772 Individual Validated Licenses and Amendments

15 CFR 773 Special Licensing Procedures

B. Contractor shall conform to reference standards, including additions and amendments, by date of issue current as of date of the Agreement, unless otherwise indicated.

1.3 REFERENCE SPECIFICATIONS

A. Unless otherwise stated in these specifications, the Reference Specification shall be the 2006 edition of the Standard Specifications for Public Works Construction (Greenbook) and the 2008 Cumulative Supplement to "Greenbook".

1.4 SUBMITTALS

A. The following shall be submitted in accordance with Section 01330 “Submittal Procedures”:

1. Preconstruction Submittals

a. List of contact personnel

b. View location map

c. Progress and completion pictures

d. Insurance (submitted with contract when executed)

e. Personnel list

f. Vehicle list

1.5 MINIMUM INSURANCE REQUIREMENTS

A. Procure and maintain during the entire period of performance under this contract insurance coverage as defined in the Invitation for Bid including:

1. Liability insurance

2. Workmen's compensation as required by Federal and State workers' compensation and occupational disease laws

3. Employer's liability coverage as required by California law

4. Property Insurance

5. Others as required by State of California law

1.6 CONTRACTOR PERSONNEL REQUIREMENTS

A. Subcontractors and Personnel

Furnish a list of contact personnel of the Contractor and subcontractors including addresses and telephone numbers for use in the event of an emergency. As changes occur and additional information becomes available, correct and change the information contained in previous lists.

B. Identification Badges

Identification badges will be furnished without charge upon successful completion of required safety training. Application for and use of badges will be as directed by the Engineer. Immediately report instances of lost or stolen badges to the Engineer.

C. Vehicle List

Submit an original list of vehicles to be utilized at the work site with the following information for each vehicle:

1. Make
2. Year
3. Model
4. License number

5. Registered owner

1.7 SUPERVISION

A. Have at least one qualified supervisor capable of reading, writing, and conversing fluently in the English language on the job site during working hours. In addition, if a Quality Control (QC) representative is required on the contract, then that individual shall also have fluent English communication skills.

1.8 PRECONSTRUCTION CONFERENCE

A. After award of the contract and Notice to Proceed but prior to commencement of any work at the site, meet with the Engineer to discuss and develop a mutual understanding relative to the administration of the value engineering and safety program, preparation of the schedule prices, shop drawings, and other submittals, scheduling programming, and prosecution of the work. Major subcontractors who will engage in the work shall also attend.

1.9 AVAILABILITY OF CADD DRAWING FILES

A. Use of these CADD files does not relieve the Contractor of duty to fully comply with the contract documents, including and without limitation, the need to check, confirm and coordinate the work of all contractors for the project.

B. If the Contractor uses, duplicates and/or modifies these electronic CADD files for use in producing construction data related to this contract, all previous indicia of ownership (seals, logos, signatures, initials and dates) shall be removed.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

PART 4 – MEASUREMENT & PAYMENTS

4.1 MEASUREMENT

A. The work of this Section is included in other Sections of work and is therefore not measured individually.

4.2 PAYMENT

A. Full compensation for providing all the labor, materials, tools, equipment and incidentals and for doing all the work involved in this Section will be considered as included in the prices bid for the various related items of work and no separate payment will be made therefor.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The work of this section consists, in general, of furnishing labor, materials, and equipment for preparation, submittal, and updating of the project schedules and reports.

1.2 CONTRACT DELIVERABLES

A. Prepare and submit to the Engineer for review and approval 4 copies of schedules and reports per Table 1, Reporting Frequency of Schedules and Reports.

B. Failure of Contractor to prepare, submit, and update the schedules and reports, in a timely, accurate manner and in accordance with the requirements of this Section will result in costs to the Owner which are difficult if not impossible to determine; therefore the Owner shall assess liquidated damages in the amount of $500 per calendar day, for every work day the schedule or report submittal, revision, or resubmittal is late. This amount shall be subtracted from any monies due and shall be forfeited by the Contractor.

C. The monthly Schedules and Reports are due and shall be delivered to the Engineer on the first day of the month or first working day thereafter.

1.3 SCHEDULING SYSTEM/METHODOLOGY

A. Contractor shall develop and maintain the overall Detailed Project Schedule. The Detailed Schedule will be reviewed and approved by the Engineer for general consistency with the Contract requirements. Contractor shall not modify, change, or update the Detailed Baseline Project Schedule or any activities therein without the prior written approval of the Engineer.

B. The scheduling method used shall be Critical Path Method (CPM) format using timescaled precedence diagramming methods. The schedules shall be time-scaled in calendar days from the Notice to Proceed. The schedule shall clearly delineate construction activities for each phase.

Table 1
Reporting Frequency of Schedules and Reports

Description Schedule or Report	Reporting Frequency*		Monthly
	Within 21 Calendar Days After Notice of Award	Within 45 Calendar Days After Notice to Proceed	
1. Summary Schedule	X		X
2. Preliminary 60-Day Schedule	X		
3. Detailed Project Schedule		X	X
4. Schedule Narrative		X	X
5. Variance Report			X
6. Equipment Schedule		X	X

- Submit 4 prints of each schedule, report, or curve via e-mail.

1.4 PRELIMINARY 60-DAY SCHEDULE

A. Contractor shall prepare a preliminary 60-Day Schedule covering the first 60 calendar days following Notice to Proceed (NTP) as well as a general approach for the remainder of the work. This Preliminary 90-Day Schedule shall be submitted within 21 calendar days after Notice of Award. The Engineer will review and respond with acceptance or direction to amend and resubmit. Contractor shall resubmit the amended schedule within 7 calendar days of receipt of Engineer's comments.

B. The schedule shall show work tasks that will or may affect completion dates including but not limited to planning, mobilization, key shop drawing, and sample submittals, fabrication and delivery of key and long-lead procurement elements. It shall also identify work items or milestones that will or may affect, or be affected by, activities of AERA, Caltrans, State Parks, Orange County RDMD, utilities, and/or other third parties. Construction activities shall later be incorporated into the Detailed Construction Schedule, including requested revisions.

1.5 SUMMARY SCHEDULE

A. Submit a Summary Schedule to the Engineer for review not later than 21 calendar days after Notice to Proceed. Use the schedule of prices as defined in the Request for Proposal to define the major construction activities. The schedule shall be in bar chart format, timescaled, with critical path identified. The schedule shall be time-scaled in calendar days from the Notice to Proceed. The schedule shall clearly delineate construction activities for each phase. The Summary Schedule shall contain but not be limited to:

B. Submit an updated Summary Schedule monthly. The updated schedule shall include but not be limited to:

1. Indicate percent complete for each activity, a graphic depiction of schedule delays from Summary Baseline Schedule activities and milestones, the activity line darkened with the progress and the reporting cutoff date lined vertically through the schedule.

1.6 DETAILED PROJECT SCHEDULE

A. Submit to the Engineer for review and approval a Detailed Project Schedule not later than 45 calendar days after the Notice to Proceed. A clear delineation of construction activities in phases is required. Upon receipt of comments by the Engineer, a meeting will be held between the Engineer, the Contractor, and all major subcontractors and suppliers to resolve any conflicts between the Detailed Project Schedule and the intent of the Contract. Contractor shall resubmit the amended Detailed Project Schedule 7 calendar days after receipt of Engineer's comments.

B. Comments made by the Engineer on the Detailed Project Schedule, during review, will not relieve the Contractor from compliance with requirements of the Contract Documents. To the extent that there are any conflicts between the approved schedule and the requirements of the Contract Documents, the Contract Documents shall govern. Acceptance by the Engineer of the Contractor's baseline schedule shall not relieve the Contractor of the responsibility for accomplishing the work within each and every intermediate Contract Milestone and completion date. Errors and/or omissions in the accepted baseline schedule, or in subsequent updates thereof, shall not excuse performance which is not in compliance which the Contract. Acceptance of a schedule update showing negative float shall not be construed as approval of a contract time extension. Acceptance by the Engineer in no way makes the Engineer an insurer of the baseline schedule's success or liable for time or cost overruns.

C. The work activities comprising the Detailed Project Schedule shall be detailed to assure planning and execution of the work and such that the schedules provide an appropriate basis for monitoring and evaluating the progress of the work. A work activity is defined as an activity which requires time and resources (labor, equipment,

and material) to complete. Activities that require unusual shift work, such as, 2 shifts, 6-day week, or so forth, shall be clearly identified in the schedule. The schedules shall indicate the sequence and interdependency of work activities. They shall include, but not be limited to, the following items:

1. Mobilization and move-in
2. Temporary construction support installations
3. Coordination with other contractors under separate contract to AERA, the Gas Company, State Parks, utilities and work by others adjacent to the work
4. Excavation, dredging, and related earthwork activities
5. Submittal preparation by the Contractor and review by the Engineer, including Shop Drawings, technical manuals, and all other submittals
6. Other major construction activities
7. Subcontractor's items of work
8. Approvals and notices required by regulatory agencies or other third party
9. Supervisory Owner activities.
10. Punch-out and acceptance of work.
11. Contract stipulated milestone dates and sequence of work constraints, substantial completion date, and final completion date.
12. Final clean up.

F. Use a computerized critical path scheduling system capable of producing computer generated reports with the following minimum information:

1. Activity identification code keyed to Summary Schedule activities
2. Activity number and activity description
3. From the date of the report, remaining working days left until early finish of each activity
4. Activity percent complete
5. Activity duration
6. Early start/finish and late start/finish
7. Actual start date/finish date
8. Total float
9. Free float
10. The predecessor and successor activities for each individual activity including the precedence logic relationships
11. A comparison between the current update and the baseline schedule

G. Activities of the Owner and the Owner’s consultants shall not be placed on the critical path, if avoidable.

1.9 MONTHLY SCHEDULE UPDATES

A. On a monthly basis, the Contractor shall meet with the Engineer for the purpose of updating the Schedule, date to be determined by Engineer and at least 7 calendar days prior to the submittal of the updated schedule.

B. Submit updated or revised schedules in the same detail as the original submittal, unless otherwise directed by the Engineer. Submit updates at the beginning of each month for the duration of the Contract. The detailed Project schedule and computer tabulations shall be reviewed jointly by the Contractor's Project Manager and Construction Scheduler and representatives of all major subcontractors.

C. The monthly submittal to the Engineer shall be accompanied by a Schedule Narrative Report. The Schedule Narrative Report shall describe the physical progress during the report period, plans for continuing the work during the forthcoming report period, actions planned to correct any negative float and an explanation of potential delays and/or problems and their estimated impact on performance and the overall project completion date.

1.10 VARIANCE REPORT

A. Submit a Variance Report monthly. It shall compare the Baseline and Updated Detailed Project Schedule and shall report non-critical activities which have been delayed 20 or more working days and critical (15 days or less total float) activities which have incurred any delay. This report shall include:

1. Activity code and description
2. Baseline scheduled early start/finish dates
3. Current anticipated early start/finish dates
4. Working days remaining to complete the activity
5. Percent complete of the activity
6. Reason for the delay in the "Remarks" column

1.11 WEEKLY SCHEDULE

A. Once each week, on a day mutually agreed to by the Engineer and the Contractor, a meeting will be held to assess the progress achieved by the Contractor during previous workweek. Contractor shall submit a progress schedule listing the activities completed and in progress for the previous week and the activities scheduled for the succeeding 2 weeks. A bar chart derived from the detailed schedule shall be used to generate the three-week window. All activities shown in this short interval schedule will be identified by the same activity numbers and descriptions as shown on the Detailed Construction Schedule. Contractor may add details to monitor this short interval Schedule.

1.12 EQUIPMENT SCHEDULE

A. Submit within 45 calendar days of Notice to Proceed, a schedule showing dates when key construction equipment shall be brought on the project to accomplish the work. This schedule shall list the quantity of equipment by type and capacity (excluding small tools) in a bar chart form.

B. Update equipment schedule monthly showing actual equipment onsite at time of reporting period and forecasted equipment requirements necessary to achieve the baseline schedule.

1.13 AS-BUILT SCHEDULE

A. Submit within 30 calendar days after the final completion, an as-built schedule which shows actual finish dates for all activities. Adjust logic ties to reflect actual manner in which the work was executed. Submittal of the as-built schedule is a condition precedent to release of retainage and final payment.

1.14 REVISIONS TO DETAILED PROJECT SCHEDULE

A. Contractor may request a revision to the current Detailed Project Schedule. Requests for schedule revision shall be submitted in writing to the Engineer with justification and supporting evidence, as the Engineer deems necessary to determine whether the Contractor is entitled to such revision under the provisions of the Contract. Adjustments in schedules cannot exceed the contract time plus approved time extensions to the construction milestone and completion requirements.

B. Requests for revisions to the schedule shall be made separately from the monthly updates and in the same format and detail as the original detailed baseline project schedule submittal. Minor changes to the accepted Schedule may be accepted at monthly meetings; a minor change is not considered a revision in the context of this Section. However, any revision shall incorporate previously made changes, both major and minor, to reflect current as-built and as-planned conditions.

C. No change to the approved Detailed Project Schedule shall be made without the prior written approval of the Engineer. Revisions to the Detailed Project Schedule shall be submitted for acceptance when required by the Engineer or on the occurrence of one or more of the following events:

1. The Engineer directs a change that affects an interim or final milestone date(s) specified under the Contract Documents or alter the length of a critical path.
2. A Change Order or Authority for Adjustment affects Contract interim or final milestone date(s) or the sequence of work.

3. Contractor elects to change any logic sequence or duration of activities or insert or delete activities.

1.19 SCHEDULE TIME EXTENSIONS

A. Float or slack time is not for the exclusive benefit or use of either the Contractor or the Owner, but it is a resource available to both parties, as needed to meet Contract milestones and Contract completion dates. It is further acknowledged that float created during the project through the actions of either party likewise remains for the benefit of both parties unless expressly agreed in advance to be for the sole benefit of one party.

PART 2 – PRODUCTS

Not Applicable

PART 3 – EXECUTION

Not Applicable

PART 4 – MEASUREMENT & PAYMENTS

4.1 MEASUREMENT

A. The work of this Section is included in other Sections of work and is therefore not measured individually.

4.2 PAYMENT

A. Full compensation for providing all the labor, materials, tools, equipment and incidentals and for doing all the work involved in this Section will be considered as included in the prices bid for the various related items of work and no separate payment will be made therefore.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including, but not limited to, the following:

1. Procedural Submittals
    a. Contractor's Construction Schedule
    b. Reports
        1) Daily Construction Reports
        2) Material Location Reports
        3) Field Correction Reports
    c. Submittal Schedule
    d. Shop Drawings
    e. Quality Assurance Submittals

B. Administrative Submittals
1. Refer to other Division – 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
    a. Permits
    b. Applications for payment
    c. Performance and payment bond
    d. Insurance certificates
    e. List of Subcontractors

C. Related Sections
1. The following Sections contain requirements that relate to this Section:
    a. Division 1 Section 01321, "Progress Schedules" specifies requirements for submittal and distribution of various schedules and reports as specified.
    b. Division 1 Section 01770, "Closeout Procedures" specifies requirements for submittal of Project Record Documents, Operation and Maintenance Manuals, and Warranties at project closeout.

1.2 DEFINITIONS

A. Submittals

1. During the process of construction, the Contractor sends many different items to the Engineer to satisfy provisions in the Contract Documents. Because the number of dissimilar items involved is large, the Contract documents use the collective term "submittals"' when referring to these items collectively. This single, comprehensive term incorporates any item the Contractor forwards to the Engineer for review or further processing.

2. Submittals serve many different purposes, but their main function is to distribute information among the various parties involved in the Project and are an expression of the Contractor's interpretation of requirements in the Contract Documents, show how the Contractor intends to fulfill these requirements, and also allow the Engineer an opportunity to correct any misunderstandings the Contractor might have regarding the intent of the Contract Documents.

B. Shop drawings

As used in this Section, drawings, schedules, diagrams, and other data prepared specifically for this contract, by contractor or through contractor by way of subcontractor, manufacturer, supplier, distributor, or other lower tier contractor, to illustrate portion of work.

C. Administrative submittals

Data presented for reviews and approval to ensure that administrative requirements of project are adequately met but not to ensure directly that work is in accordance with design concept and in compliance with contract documents.

1.3 SUBMITTAL PROCEDURES

A. Coordination

1. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal in accordance with the dates established in the Submittal Schedule.
2. Begin submittal process only after receipt of accepted submittal schedule.
3. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.

B. Processing

1. Submittals shall be addressed as follows, unless otherwise directed:

Moffatt & Nichol
3780 Kilroy Airport Way, Suite 600
Long Beach, CA 90806
Attention: Robert Sloop

2. To avoid the need to delay installation as a result of the time required to review and process submittals, allow time as noted below for submittal review, including time for resubmittals.

a. Allow Engineer 10 working days, excluding legal holidays, Saturdays or Sundays, for initial review process.

1) Allow additional time if Engineer must withhold review to permit coordination with subsequent submittals.

b. Allow Engineer 10 working days, excluding legal holidays, Saturdays or Sundays, for each resubmittal review process.

c. Time for review process starts when Engineer receives submittal and is exclusive of time required for shipping to and from the Engineer's office.

1) Submittals received by 10:00 am will be considered as received on that day.

2) Submittals received after 10:00 am will be considered received on the next working day.

3. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer in accordance with the dates established in the Submittal Schedule.

4. Submittals not requested will not be reviewed or retained by the Engineer.

5. Upon receipt of submittals, Engineer will assign a Submittal Log Number thereto. Contractor, in any subsequent correspondence, shall refer to this Submittal Log Number to expedite replies relative to previous submittals.

6. Unless Contractor makes other arrangements, submittals will be returned by standard USPS or UPS ground delivery.

7. Engineer's Owners beyond those stipulated in the Owner/ Engineer Agreement may be a cause for the Owner to impose reimbursement by the Contractor for these additional Owners performed by the Engineer. As a guide to establish limits of these Owners and provide a base for the Contractor to use in preparing its Bid, the following limits shall apply:

a. Up to two (2) reviews for each Shop Drawing, Product Data item, sample and similar submittals.

C. Submittal Preparation

1. Place a permanent label or title block on each submittal for identification. Size of label is optional, but all Information required shall be included and be easily readable.

a. Include the following information on the label for processing and recording action taken:

1) Project name
2) Project number (6170-05)
3) Date
4) Name and address of Engineer: do not include logo
5) Name and address of Contractor

6) Name and address of subcontractor, supplier, manufacturer as applicable.
7) Name of drawing preparer: not initials
8) Number and title of appropriate Specification Section
9) Drawing number and detail references, as appropriate
10) Name of person and company preparing submittal

2. Provide a space approximately 3-1/2' x 11" on the label or space on Shop Drawings, Product Data, and Samples to record the Contractor's review and approval markings and the action taken, and the Engineer's action stamp.

3. Shop Drawings, Product Data, and Samples not bearing the Contractor's review and approval stamps, with action taken, and signature, will not be accepted for review.

4. Shop Drawings, Product Data, and Samples submitted without specified space for review, approval, information label, and action stamps, will not be accepted for review.

D. Submittal Transmittal

1. General
   a. Transmit each submittal from Contractor to Engineer using a transmittal form.
   b. The Engineer will not accept submittals received from sources other than the Contractor and will be returned without action.

2. Recording Information
   a. On the transmittal, record relevant information and requests for data.
   b. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations.
   c. Include Contractor's certification that information complies with Contract Document requirements.

1.5 CONTRACTOR'S SUBMITTAL REGISTER

A. Prepare and maintain submittal register, as the work progresses.

1. Submittal Register
   Contractor shall prepare and submit the submittal register using a form approved by the Engineer. Submit with quality control plan and project schedule. Verify that all submittals required for project are listed and add missing submittals.

2. Copies Delivered to the Owner
   Deliver one copy of submitted register updated by contractor to the Owner with each invoice request.

1.6 SUBMITTAL SCHEDULE

A. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values and the list of products as well as the Contractor's Construction Schedule.

B. In addition to the Information to be provided on the Submittal Schedule, provide on Contractor's letterhead a list of all subcontractors and a description of the work to be performed by the subcontractor.

C. Distribution

1. Following response to initial submittal, print and distribute copies to the Engineer, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.
2. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

1.7 REPORTS

A. Daily Construction Reports

1. Prepare a daily construction report, recording the following information concerning events at the site, and submit duplicate copies to the Engineer and Owner for record at weekly intervals:
   a. List of subcontractors at the site
   b. Approximate count of personnel at the site
   c. High and low temperatures, general weather conditions
   d. Accidents and unusual events
   e. Meetings and significant decisions
   f. Stoppages, delays, shortages, losses
   g. Meter readings and similar recordings
   h. Emergency procedures
   i. Orders and requests of governing authorities
   j. Change Orders received, implemented
   k. Owners connected, disconnected
   l. Equipment or system tests and start-ups
   m. Partial Completions,
   n. Substantial Completions authorized

B. Field Correction Reports

1. When the need to make corrective action that requires a departure from the Contract Documents arises, prepare a detailed report including a statement describing the problem and the corrective changes. Indicate reasons the Contract Documents cannot be followed. Submit a copy to the Engineer Immediately.

1.8 SHOP DRAWINGS

A. General

1. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents.
   a. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings.
   b. Standard information prepared without specific reference to the Project is not a Shop Drawing.
2. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Shop Drawings shall be numbered consecutively. Include the following information:
   a. Clearly marked with the Engineer’s Project number, Owner's Project number, if any, and Contract type
   b. Engineer’s Drawing number, if any, on which the item is indicated, and the Specification section number
   c. Name of the Contractor
   d. System in which the item is a component
   e. Highlight, encircle, or otherwise indicate deviations from the Contract Documents
   f. Dimensions
   g. Identification of products and materials included by sheet and detail number and Specification Number
   h. Notation of dimensions established by field measurement
   i. Details of Construction
3. Do not submit Shop Drawings for construction that do not comply with requirements of the Contract Documents.
4. Contractor shall maintain complete set of Shop Drawings as "Record Shop Drawings", to turn over to the Owner at Project closeout.
   a. Refer to Section 01770 "Closeout Procedures", for additional requirements.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

Not Applicable

PART 4 – MEASUREMENT & PAYMENTS

4.1 MEASUREMENT

A. The work of this Section is included in other Sections of work and is therefore not measured individually.

4.2 PAYMENT

A. Full compensation for providing all the labor, materials, tools, equipment and incidentals and for doing all the work involved in this Section will be considered as included in the prices bid for the various related items of work and no separate payment will be made.

END OF SECTION

SUBMITTAL PROCEDURES APPENDIX 01330-A

ENGINEER'S ACTION STAMP SAMPLE

Bolsa Chica Maintenance Dredging Project
Huntington Beach, CA

Submittal

Review of shop drawings, product data and/or samples is for conformance with the design concept and with the information given in the Contract Documents. This review does not relieve the Contractor of responsibility for any deviation from the Contract Documents. Refer to the Contract Documents relative to submittals for clarification of Contractor responsibility.

INTERNATIONAL USE ONLY

DISCIPLINE	REVIEWER	DATE	Remarks
Architectural / Design			
Structural			
Civil / Site			
Mechanical			
Electrical			
Interiors			

SELECTION ·

Final Action for Contractor:

By · **Date ·**

☐ **Approved (APP) ·** Work May Proceed

☐ **Not Approved (NA) ·** Work Shall Not Proceed Based on Information Submitted. Resubmit.

☐ **Approved as Noted (ANN)·** Proceed on Basis of Revised Information Noted

☐ **Submittal Not Requested (SNR)**

Project No. · **Item No. ·**

SUBMITTAL PROCEDURES APPENDIX 01330-B
CONTRACTOR'S SUBMITTAL LABEL INFORMATION SAMPLE

Project	Bolsa Chica Maintenance Dredging Project
CSLC Contract No.	
Engineer's Project No.	6170-05
Date	
Engineer	Moffatt & Nichol 3780 Kilroy Airport Way Suite 600 Long Beach, CA 90806
General Contractor Address, phone number	
Subcontractor Address, phone number	
Supplier/Manufacturer Address Phone No.	
Drawn By (name, not initials)	
Specification No. and Title	
Drawing No.	
Detail Reference (if applicable)	
Name of person and company preparing submittal	

SUBMITTAL PROCEDURES APPENDIX 01330-C
CONTRACTOR'S SUBMITTAL LABEL INFORMATION SAMPLE

Contractor's Logo
and address here)

SUBMITTAL TRANSMITTAL

Project: Bolsa Chica Lowland Restoration Project

CSLC Contract No: _____
Engineer's Project No: 5175
Contractor's Project No: _____
Date Sent to Eng.: _____
Date Returned to Contr.: _____

To: Moffatt & Nichol
3780 Kilroy Airport Way Suite 600
Long Beach, CA 90806

Attn: Mr. Robert Sloop

Returned Via:
___ UPS Standard Ground
___ UPS/FedEx Overnight (Purchase order required)
___ Your Messenger

Submittal Description:

Specification Section No.:	Items Submitted: Shop Drawings, Product Data, Samples, Maint. Manuals, Etc.	Fabricator/Supplier:	Review Code*:	Eng. Submittal Log. No.:

Deviations, Minor Variations and Limitations: _____

The Contractor certifies that it has examined the items submitted by this transmittal and finds that they are, to the best of its knowledge, in compliance with the Contract Documents.

By: _____ Name: _____
(Signature required)

M&N Remarks:

The information submitted has been reviewed for compliance with the Contract Documents. The review and the resulting notations so not assume completeness of the submittal nor suggest that information not requested is waived. Further, the review does not relieve the Contractor from the satisfactory completion of the Work in compliance with the Contract Documents.

M&N

By: _____ Name: _____
(Signature required)

* Review Codes:

APP	Approved:	Work May Proceed
AAN	Approved As Noted:	Proceed on Basis of Revised Information Noted
NA	Not Approved:	Work Shall Not Proceed Based on Information Submitted. Resubmit.
SNR	Submittal Not Requested:	Not Reviewed or Retained by the COTR.

Moffatt & Nichol:

Primary Checker: Secondary Checkers:

PART 1 - GENERAL

1.1 WORK INCLUDED

A. This project includes metric units of measurements. The metric units used are the International System of Units (SI) developed and maintained by the General Conference on Weights and Measures (CGPM); the name International System of Units and the international abbreviation SI were adopted by the 11th CGPM in 1960. A number of circumstances require that both metric SI units and English inch-pound (I-P) units be included in a section of the specifications. When both metric and I-P measurements are included, the section may contain measurements for products that are manufactured to I-P dimensions and then expressed in mathematically converted metric value (soft metric) or, it may contain measurements for products that are manufactured to an industry recognized rounded metric (hard metric) dimensions but are allowed to be substituted by I-P products to comply with the law. Dual measurements are also included to indicate industry and/or Department standards, test values or other controlling factors, such as the code requirements where I-P values are needed for clarity or to trace back to the referenced standards, test values or codes.

1.2 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 380	Practice for Use of the International System of Units (SI)
ASTM E 621	Practice for Use of Metric (SI) Units in Building Design and Construction

1.3 USE OF MEASUREMENTS

A. Measurements shall be either in SI or I-P units as indicated, except for soft metric measurements or as otherwise authorized. When only SI or I-P measurements are specified for a product, the product shall be procured in the specified units (SI or I-P) unless otherwise authorized by the Engineer. The Contractor shall be responsible for all associated labor and materials when authorized to substitute one system of units for another and for the final assembly and performance of the specified work and/or products.

B. Hard Metric

A hard metric measurement is indicated by an SI value with no expressed correlation to an I-P value. Hard metric measurements are often used for field data such as distance from one point to another or distance above the floor. Products are considered to be hard metric when they are manufactured to metric dimensions or have an industry recognized metric designation.

C. Soft Metric

1. A soft metric measurement is indicated by an SI value which is a mathematical conversion of the I-P value shown in parentheses (e.g. 38.1 mm (1-1/2 inches)). Soft metric measurements are used for measurements pertaining to products, test values, and other situations where the I-P units are the standard for manufacture, verification, or other controlling factor. The I-P value shall govern while the metric measurement is provided for information.

2. A soft metric measurement is also indicated for products that are manufactured in industry designated metric dimensions but are required by law to allow substitute I-P products. These measurements are indicated by a manufacturing hard metric product dimension followed by the substitute I-P equivalent value in parentheses (e.g., 190 x 190 x 390 mm (7-5/8 x 7-5/8 x 15-5/8 inches)).

D. Neutral

A neutral measurement is indicated by an identifier which has no expressed relation to either an SI or an I-P value (e.g., American Wire Gage (AWG) which indicates thickness but in itself is neither SI nor I-P).

1.4 COORDINATION

A. Discrepancies, such as mismatches or product unavailability, arising from use of both metric and non-metric measurements and discrepancies between the measurements in the specifications and the measurements in the drawings shall be brought to the attention of the Engineer for resolution.

1.5 RELATIONSHIP TO SUBMITTALS

A. Submittals for Department approval or for information only shall cover the SI or I-P products actually being furnished for the project. The Contractor shall submit the required drawings and calculations in the same units used in the contract documents describing the product or requirement unless otherwise instructed or approved. The Contractor shall use ASTM E 380 and ASTM E 621 as the basis for establishing metric measurements required to be used in submittals.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The work of this section consists of furnishing transportation, labor, materials, equipment and incidentals required to place, construct, maintain and remove temporary facilities.

1.2 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C511 Reduced-Pressure Principle Backflow Prevention Assembly

FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH (FCCCHR)

FCCCHR Manual-9 Manual of Cross-Connection Control

FCCCHR List List of Approved Backflow Prevention Assemblies

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)

FHWA SA-89-006 Manual on Uniform Traffic Control Devices

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 National Electrical Code

NFPA 241 Safeguarding Construction, Alteration, and Demolition Operations

1.3 SUBMITTALS

A. Government approval is required for all submittals. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

1. Preconstruction Submittals
   a. Traffic control plan
   b. Construction site plan

2. Product Data
3. Test Reports
4. Certificates

1.4 CONSTRUCTION SITE PLAN

A. Prior to the start of work, submit a site plan showing the locations of temporary facilities (including layouts and details, equipment and material storage area (onsite and offsite), and access and haul routes used for this contract. Show locations of safety and construction fences, site trailers, construction entrances, trash dumpsters, temporary sanitary facilities, and worker parking areas.

1.5 TEMPORARY UTILITIES

The Contractor shall provide all utilities for any temporary on-site office.

The contractor will be required to establish an account with Southern California Edison for electric dredging operations. The location of the meter and switchgear is shown on the plans and the address for the connection is 19800 Pacific Coast Highway, Huntington Beach, CA. The Owner available is 12 KV, 200 amps, 3 phase.

1.6 WEATHER PROTECTION

A. Take necessary precautions to ensure that temporary covers over stored materials are monitored carefully. Take immediate actions required to seal and secure covers when rain or other detrimental weather is imminent, and at the end of each workday.

B. Site Storm Protection: When a warning of gale force winds is issued, take precautions to minimize danger to persons, and protect the work and nearby property. Precautions shall include, but are not limited to, removing loose materials, tools and equipment from exposed locations; and removing or securing temporary work. When a warning of heavy rains is issued, take precautions to minimize damages due to floods or high standing water. Precautions shall include, but are not limited to ensuring all water control structures are operational and pumps are readily available to maintain water levels consistent with the site water control plan.

1.9 STORAGE AREAS

A. Storage Size and Location: The open site available for storage shall be confined to the indicated operations areas as indicated on the drawings and/or described in the permits.

1.10 TEMPORARY SANITARY FACILITIES

A. Provide adequate sanitary conveniences of a type approved for the use of persons employed on the work, properly secluded from public observation, and maintained in such a manner as required and approved by the Engineer. Temporary sanitary facilities shall be furnished, maintained and removed after acceptance of the work by a commercial firm licensed to do this work by the government entity having jurisdiction over the area where the project is located. Maintain these conveniences at all times without nuisance. Upon completion of the work, remove the conveniences from the premises, leaving the premises clean and free from nuisance. Include provisions for pest control and elimination of odors.

1.11 TEMPORARY BUILDINGS

A. Temporary facilities (including trailers) shall be in like new condition. Locate these facilities where indicated on the Plans, and within the indicated operations area in the AERA facility. Storage of material/debris under such facilities is prohibited. Contractor shall be responsible for the security of the stored property.

B. Maintenance of Temporary Facilities
Suitably paint and maintain all temporary facilities. Failure to do so will be sufficient reason to require their removal.

C. Contractor’s Administration Office
An office not to exceed 7.3m by 18.3m (24’ x 60’) may be placed in the area adjacent to the Owner and CM offices for the Contractor’s administration and QC staff.

D. Trailers or Storage Buildings
Trailers or storage buildings will be permitted, where space is available, subject to the approval of the Engineer. The trailers or buildings shall be in good condition, free from visible damage rust and deterioration, and meet all applicable safety requirements. Trailers shall be roadworthy and comply with all appropriate state and local vehicle requirements. Failure to maintain storage trailers or buildings to these standards shall result in the removal of non-complying units at the Contractor's expense. A sign not smaller than 0.6m by 0.6m (24 by 24 inches) shall be conspicuously placed on the trailer depicting the company name. Trailers shall be anchored to resist high winds and must meet applicable State and local standards for anchoring mobile buildings and trailers.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

3.1 TEMPORARY PHYSICAL CONTROLS

A. Access Controls

1. Signs

Place warning signs at the construction area perimeter designating the presence of construction hazards requiring unauthorized persons to keep out. Signs must be placed at the dredge discharge area warning the public of construction activities.

3.2 TEMPORARY WIRING

A. Provide temporary wiring in accordance with NFPA 241 and NFPA 70, Article 305-6(b), Assured Equipment Grounding Conductor Program. Program shall include frequent inspection of all equipment and apparatus.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. The work of this Section is included in other Sections of work and is therefore not measured individually.

4.2 PAYMENT

A. Full compensation for providing all the labor, materials, tools, equipment and incidentals and for doing all the work involved in this Section will be considered as included in the prices bid for the various related items of work and no separate payment will be made therefor.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The work of this section consists, in general, of conforming to the requirements specified.

1.2 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. FISH & WILDLIFE OWNER (USFWS)

360 FW 4	Fish & wildlife Construction Management Safety Policy

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z359.1	Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components

ASME INTERNATIONAL (ASME)

ASME B30.5	Mobile and Locomotive Cranes
ASME B30.8	Floating Cranes and Floating Derricks
ASME B30.22	Articulating Boom Cranes

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR 1910	Safety and Health Regulation in General Industry
29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
29 CFR 1926.500	Fall Protection

U. S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 Safety and Health Requirements Manual

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10 Portable Fire Extinguishers
NFPA 70 National Electrical Code
NFPA 241 Safeguarding Construction, Alteration, and Demolition Operations

1.3 SUBMITTALS

A. Owner approval is required for all submittals. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:
   1. Preconstruction Submittals
      Accident Prevention Plan (APP)
      Activity Hazard Analysis (AHA)
   2. Certificates
      Certificate of Compliance (Crane)

1.4 DEFINITIONS

A. Terms are defined as follows:
   1. Associate Safety Professional (ASP). An individual who is currently certified by the Board of Certified Safety Professionals.
   2. Certified Safety Professional (CSP). An individual who is currently certified by the Board of Certified Safety Professionals.
   3. Certified Safety Trained Supervisor (STS). An individual who is currently certified by the Board of Certified Safety Professionals.
   4. High Visibility Accident. Any mishap which may generate publicity and/or high visibility.
   5. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even though provided by a physician or registered personnel.
   6. Multi-Employer Work Site (MEWS). A multi-employer work site, as defined by OSHA, is one in which many employers occupy the same site. The Owner considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors.
   7. Operating Envelope. The area surrounding any crane. Inside this "envelope" is the crane, the operator, riggers, rigging gear between the hook and the load, the load and the crane's supporting structure ground, rail, or similar items.

10. Recordable Injuries or Illnesses. Any work-related injury or illness that results in:
    a. Death, regardless of the time between the injury and death, or the length of the illness;
    b. Days away from work;
    c. Restricted work;
    d. Transfer to another job;
    e. Medical treatment beyond first aid;
    f. Loss of consciousness; or
    g. A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in actions listed above.
11. Site Safety and Health Officer (SSHO). The superintendent or other qualified or competent person who is responsible for the on-site safety and health required for the project. The Contractor quality control (QC) person can be the SSHO on this project.
12. Weight Handling Equipment (WHE) Accident. A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; and collision, including unplanned contact between the load, crane, and/or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.)

1.5 REGULATORY REQUIREMENTS

A. In addition to the detailed requirements included in the provisions of this contract, work performed shall comply with AERA Energy Environmental, Health and Safety Manual, CALOSHA Construction Safety Orders, USACE EM 385-1-1, and other related federal, state, and local, laws, ordinances, criteria, rules and regulations. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply.

1.6 DRUG PREVENTION PROGRAM

A. Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site. Ensure that no employee uses illegal drugs or consumes alcohol during work hours. Ensure there are no employees under the influence of drugs or alcohol during work hours. After accidents, collect blood, urine, or saliva specimens and test the injured and involved employees for the influence of drugs and alcohol. A copy of the test shall be made available to the Owner upon request.

1.7 TRAINING

A. New Employee Indoctrination
New employees (prime and sub contractor) shall be informed of specific site hazards, attend and pass a site safety review before they begin work as called for in Section 01140 Work Restrictions. All employees will be required to attend AERA training. Documentation of this orientation shall be kept on file at the project site.

1.8 DISPLAY OF SAFETY INFORMATION

A. Within 2 calendar days after commencement of work, erect a safety bulletin board at the job site.
   1. The following information shall be displayed on the safety bulletin board in clear view of the on-site construction personnel, maintained current, and protected against the elements and unauthorized removal:
      a. Map denoting the route to the nearest emergency care facility.
      b. Emergency phone numbers.
      c. Copy of the most up-to-date APP.
      d. OSHA 300A Form.
      e. A sign indicating the number of hours worked since last lost workday accident.
      f. OSHA Safety and Health Protection-On-The-Job Poster
      g. Safety and Health Warning Posters.

1.9 EMERGENCY MEDICAL TREATMENT

A. Contractors shall arrange for their own emergency medical treatment. The Owner has no responsibility to provide emergency medical treatment.

1.10 REPORTS

A. Accident Reports
   1. Report Details

a. For recordable injuries and illnesses, and property damage accidents resulting in at least $2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the CALOSHA Incident Report and provide the report to the Engineer within 1 calendar day of the accident. The Engineer will provide copies of any required or special forms.

b. For a weight handling equipment accident the Prime Contractor shall conduct an accident investigation to establish the root cause of the accident, complete the required CALOSHA Accident Report form and provide the report to the Engineer within 30 calendar days of the accident. The Engineer will provide a blank copy of the accident report form.

B. Accident Notification

Notify the Engineer as soon as practical, but not later than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than $2,000, or any weight handling equipment accident involving an overturned crane, collapsed boom, or any other major damage to the crane or adjacent property. Information shall include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident, including the type of construction equipment used. Preserve the conditions and evidence on the accident site.

C. Regulatory Citations and Violations

Contact the Engineer immediately of any OSHA or other regulatory agency inspection or visit, and provide the Engineer with a copy of each citation, report, and Contractor response. Correct violations and citations promptly and provide written corrective actions to the Engineer.

D. Certificate of Compliance

The Contractor shall provide a Certificate of Compliance for each crane entering an activity under this contract (see Contracting Officer for a blank certificate). Certificate shall state that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance shall comply with 29 CFR 1926 and USACE EM 385-1-1 section 16 and Appendix H. Certify on the Certificate of Compliance that the crane operator(s) is qualified and trained in the operation of the crane to be used.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 CONSTRUCTION AND/OR OTHER WORK

A. General

The Contractor shall comply with USACE EM 385-1-1, NFPA 241, the APP, the AHA, CALOSHA and other related submittals and activity fire and safety regulations.

3.2 EQUIPMENT

A. Material Handling Equipment

1. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.
2. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.
3. Operators of forklifts or power industrial trucks shall be licensed in accordance with CALOSHA.

C. Equipment and Mechanized Equipment

1. Equipment Requirements:
   a. Equipment shall be operated by designated qualified operators. Proof of qualifications shall be kept on the project site for review.
   b. Manufacture specifications or owner's manual for the equipment shall be on site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA or USACE EM 385-1-1. Such additional safety precautions or requirements shall be incorporated into the AHAs.
   c. Equipment and mechanized equipment shall be inspected in accordance with manufacturer's recommendations for safe operation by a competent person prior to being placed into use.
   d. Daily checks or tests shall be conducted and documented on equipment and mechanized equipment by designated competent persons.

3.3 HOUSEKEEPING

A. Clean-Up
All debris in work areas shall be cleaned up daily or more frequently if necessary. Construction debris may be temporarily located in an approved location; however garbage accumulation must be removed each day. All trash receptacles shall be emptied on Fridays and the day before a holiday.

B. Dust control
In addition to the dust control measures required elsewhere in the contract documents, dry cutting of brick or masonry shall be prohibited. Wet cutting must address control of water run off.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. The work of this Section is included in other Sections of work and is therefore not measured individually.

4.2 PAYMENT

A. Full compensation for providing all the labor, materials, tools, equipment and incidentals and for doing all the work involved in this Section will be considered as included in the prices bid for the various related items of work and no separate payment will be made therefor.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The work of this section consists, in general, of conforming to the requirements specified.

1.2 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910.120	Hazardous Waste and Emergency Response
40 CFR 112	Oil Pollution Prevention
40 CFR 122.26	EPA National Pollutant Discharge Elimination System Permit Regulations
40 CFR 241	Guidelines for Disposal of Solid Waste
40 CFR 268	Land Disposal Restrictions
40 CFR 273	Universal Waste Management
40 CFR 279	Used Oil Regulations
40 CFR 355	Emergency Planning and Notification
40 CFR 716	Health and Safety Data Reporting

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 832-R-92-005	Storm Water Management for Construction Activities

US. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(1996) U.S. Army Corps on Engineers Safety and Health Requirements Manual
WETLAND MANUAL	Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1

1.3 DEFINITIONS

A. Sediment
Soil and other debris that has been eroded and has been transported by runoff water or wind.

B. Solid Waste

Garbage, refuse, debris, sludge, or other discharged material including solid, liquid, semisolid, or contained gaseous materials resulting from domestic, industrial, commercial, mining, or agricultural operations. Material not regulated as solid waste are: nuclear source or byproduct materials regulated under the Federal Atomic Energy Act of 1954 as amended; suspended or dissolved materials in domestic sewage effluent or irrigation return flows, or other regulated point source discharges; regulated air emissions; and fluids or wastes associated with natural gas or crude oil exploration or production.

1. Definitions

a. Green waste: The vegetative matter from landscaping, land clearing and grubbing, including, but not limited to, grass, bushes, scrubs, small trees and saplings, tree stumps and plant roots. Marketable trees, grasses and plants that are indicated to remain, be re-located, or be re-used are not included.

b. Surplus soil: Existing soil that is in excess of what is required for this work, including aggregates intended, but not used, for on-site mixing of concrete, mortars and paving. Contaminated soil meeting the definition of hazardous material or hazardous waste is not included.

c. Inert construction and demolition debris: Broken or removed concrete, masonry, and rock asphalt paving; ceramics; roofing paper and shingles. Inert materials may be reinforced with or contain ferrous wire, rods, accessories and weldments.

d. Wood: Dimension and non-dimension lumber, plywood, chipboard, hardboard. Treated and/or painted wood that meets the definition of lead contaminated or lead based contaminated paint is not included.

e. Scrap metal: Scrap and excess ferrous and non-ferrous metals such as reinforcing steel, structural shapes, pipe and wire that are recovered or collected and disposed of as scrap. Scrap metal meeting the definition of hazardous material or hazardous waste is not included.

f. Paint cans: Metal cans that are empty of paints, solvents, thinners and adhesives. If permitted by the paint can label, a thin dry film may remain in the can.

g. Recyclables: Materials, equipment and assemblies such as doors, windows, door and window frames, plumbing fixtures, glazing and mirrors that are recovered and sold as recyclable. Metal meeting the definition of lead contaminated or lead based paint contaminated may not be included as recyclable if sold to a scrap metal company. Paint cans may not be included as recyclable if sold to a scrap metal company.

C. Debris

Non-hazardous solid material generated during the construction, demolition, or renovation of a structure which exceeds 70mm (2.5 inches) particle size that is: a manufactured object; plant or animal matter; or natural geologic material (e.g. cobbles and boulders). A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

D. Hazardous Debris

As defined in paragraph entitled "Debris" of this section, debris that contains listed hazardous waste.

E. Chemical Wastes

This includes salts, acids, alkalis, herbicides, pesticides, and organic chemicals.

F. Garbage

Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

G. Hazardous Waste

Any discarded material, liquid, solid, or gas, which meets the definition of hazardous material or is designated hazardous waste by the Environmental Protection Agency or State Hazardous Control Authority.

H. Oily Waste

Petroleum products and bituminous materials.

I. Regulated Waste

Those solid waste that have specific additional Federal, state, or local controls for handling, storage, or disposal.

J. Class I Ozone Depleting Substance (ODS)

Class I ODS is defined in Section 602(a) of The Clean Air Act and includes the following chemicals:

chlorofluorocarbon-11 (CFC-11)	chlorofluorocarbon-213 (CFC-213)
chlorofluorocarbon-12 (CFC-12)	chlorofluorocarbon-214 (CFC-214)
chlorofluorocarbon-13 (CFC-13)	chlorofluorocarbon-215 (CFC-215)
chlorofluorocarbon-111 (CFC-111)	chlorofluorocarbon-216 (CFC-216)
chlorofluorocarbon-112 (CFC-112)	chlorofluorocarbon-217 (CFC-217)
chlorofluorocarbon-113 (CFC-113)	halon-1211
chlorofluorocarbon-114 (CFC-114)	halon-1301
chlorofluorocarbon-115 (CFC-115)	halon-2402
chlorofluorocarbon-211 (CFC-211)	carbon tetrachloride
chlorofluorocarbon-212 (CFC-212)	methyl chloroform

K. Hazardous Materials

Any material that is defined in 49 CFR 171, listed in 49 CFR 172, and regulated as a hazardous material in accordance with 49 CFR 173, requires a Material Safety Data Sheet (MSDS) in accordance with 29 CFR 1910.120, or which during end use, treatment, handling, storage, transportation or disposal meets or has components which meet or have the potential to meet the definition of a Hazardous Waste in accordance with 40 CFR 261. Throughout this specification, hazardous material includes hazardous chemicals.

L. Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

M. Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

N. Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, paint thinners, waste thinners, paints, solvents, waste solvents, excess pesticides, and contaminated pesticide equipment rinse water.

O. Land Application for Discharge Water

The term "Land Application" for discharge water implies that the Contractor shall discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" shall occur. Land Application shall be in compliance with all applicable Federal, State, and local laws and regulations.

P. Pesticide

Pesticide is defined as any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

Q. Pests

The term "pests" means arthropods, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

R. Surface Discharge

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency.

S. Waters of the United States
All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

1.4 GENERAL REQUIREMENTS

A. The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all project permit requirements and State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental requirements.

1.5 SUBCONTRACTORS

A. The Contractor shall ensure compliance with this Section by all subcontractors and suppliers and their employees.

1.6 PAYMENT

A. No separate payment will be made for work covered under this section. The Contractor shall be responsible for payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor. All costs associated with this section shall be included in the contract price. The Contractor shall be responsible for payment of all fines/fees for violation or non-compliance with permit requirements Federal, State, Regional and local laws and regulations.

1.7 SUBMITTALS

A. Approval is required for all submittals. The following shall be submitted in accordance with Section 01330, “Submittal Procedures”:

1. Preconstruction Submittals
   Environmental protection plan
   Dirt and dust control plan
   Environmental Quality Board Permits
2. Test Reports
   Laboratory analysis
3. Closeout Submittals
   Some of the records listed below are also required as part of other submittals. For the "Records" submittal, maintain on-site a separate three-ring Environmental Records binder and submit at the completion of the project. Make separate parts to the binder corresponding to each of the applicable sub items listed below.

Preconstruction survey
Solid waste disposal permit
Waste determination documentation
Disposal documentation for hazardous and regulated waste
Contractor 40 CFR employee training records
Regulatory notification
Erosion and sediment control inspection reports
Solid waste disposal report
Contractor Hazardous Material Inventory Log

1.8 DIRT AND DUST CONTROL PLAN

A. Submit truck and material haul routes along with a plan for controlling dirt, debris, and dust on base roadways. As a minimum, identify in the plan the subcontractor and equipment for cleaning along the haul route and measures to reduce dirt, dust, and debris from roadways.

1.9 LABORATORY ANALYSIS

A. Submit a copy of a laboratory analysis of solid waste and debris with the potential of becoming classified as a hazardous waste. Waste stream determinations are required at the point of generation and must sufficiently document whether the waste will be a solid waste, hazardous waste, or Resource Conservation and Recovery Act (RCRA) exempt waste. Determinations must use EPA approved methods and provide written rational for whether the waste is classified as hazardous or non-hazardous. The Contractor will bear the cost of the waste stream determinations, and the Engineer reserves the right to request waste stream determinations on questionable waste streams.

1.10 REPORTS

A. Preconstruction Survey

Prior to start of any onsite construction activities, the Contractor and the Engineer shall make a joint condition survey. Immediately following the survey, the Contractor shall prepare a brief report including a plan describing the features requiring protection, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of pickleweed, spiney rush, woolley head and other sensitive plant areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report shall be signed by both the Contractor and the Engineer upon mutual agreement between Contractor and Engineer as to its accuracy and completeness. The Contractor shall protect those environmental features included in the survey report and any

indicated on the drawings, regardless of interference, which their preservation may cause to the Contractor's work under the contract.

B. Solid Waste Disposal Permit
Submit one copy of a State and local permit or license showing such agencies' approval of the disposal plan before transporting wastes off-site.

C. Waste Determination Documentation
The Contractor will complete a Waste Determination form (provided at the pre-construction conference) for all contractor derived wastes to be generated. The waste determination must be based upon either a constituent listing from the manufacturer used in conjunction with consideration of the process by which the waste was generated, EPA approved analytical data, or laboratory analysis (Material Safety Data Sheets (MSDS) by themselves are not adequate). All support documentation must be attached to the Waste Determination form. As a minimum, a Waste Determination form must be provided for the following wastes (this listing is not all inclusive): oil and latex based painting and caulking products, solvents, adhesives, aerosols, petroleum products, and all containers of the original materials.

D. Disposal Documentation for Hazardous and Regulated Waste
Submit a copy of the applicable EPA and State permit(s), manifest(s), or license(s) for transportation, treatment, storage, and disposal of hazardous and regulated waste by permitted facilities.

E. Contractor 40 CFR Employee Training Records
Prepare and maintain employee training records throughout the term of the contract meeting applicable 40 CFR requirements. The Contractor will ensure every employee completes a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures compliance with Federal, State and local regulatory requirements for RCRA Large Quantity Generator. The Contractor will provide a Position Description for each employee, by subcontractor, based on the Davis-Bacon Wage Rate designation or other equivalent method, evaluating the employee's association with hazardous and regulated wastes. This Position Description will include training requirements as defined in 40 CFR 265 for a Large Quantity Generator facility. Submit these training records to the Engineer at the conclusion of the project, unless otherwise directed.

F. Regulatory Notification
The Contractor is responsible for all regulatory notification requirements in accordance with Federal, State and local regulations. The Contractor will forward copies to the Engineer prior to commencement of work activities. Typically, regulatory notifications must be provided for the following (this listing is not all

inclusive): demolition, renovation, NPDES defined site work, remediation of controlled substances (asbestos, hazardous waste, lead paint).

G. Erosion and Sediment Control Inspection Reports
The Contractor shall inspect disturbed areas of the construction site, areas used for storage of materials that are exposed to precipitation that have not been finally stabilized, stabilization practices, structural practices, other controls, and locations where vehicles exit the site at least once every seven (7) calendar days and within 24 hours of the end of any storm that produces 6mm (0.25-inch) or more rainfall at the site. Where sites have been finally stabilized, such inspection shall be conducted at least once every month.

H. Solid Waste Disposal Report
Monthly the Contractor will submit a solid waste disposal report to the Engineer. For each waste, the report will state the classification (using the definitions provided in this section), amount, location, and name of the business receiving the solid waste. The Contractor will include copies of the waste handling facilities' weight tickets, receipts, bills of sale, and other sales documentation. In lieu of sales documentation, the Contractor may submit a statement indicating the disposal location for the solid waste which is signed by an officer of the Contractor firm authorized to legally obligate or bind the firm. The sales documentation or Contractor certification will include the receiver's tax identification number and business, EPA or State registration number, along with the receiver's delivery and business addresses and telephone numbers. For each solid waste retained by the Contractor for his own use, the Contractor will submit on the solid waste disposal report the information previously described in this paragraph. Prices paid or received will not be reported to the Engineer unless required by other provisions or specifications of this Contract or public law.

1.11 CLASS I ODS PROHIBITION

A. Class I ODS as defined and identified herein will not be used in the performance of this contract, nor be provided as part of the equipment. This prohibition will be considered to prevail over any other provision, specification, drawing, or referenced documents.

1.12 ENVIRONMENTAL PROTECTION REQUIREMENTS

A. General
Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during normal construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Comply with Federal, State, and local regulations

pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

Attend an environmental brief to be included in the preconstruction meeting. Provide the following information: types, quantities, and use of hazardous materials that will be brought onto the activity; types and quantities of wastes/wastewater that may be generated during the contract.

B. Licenses and Permits
The Contractor shall obtain licenses and permits except for those appearing as attachments:

C. Contractor Liabilities for Environmental Protection
The Contractor is advised that this project and the station are subject to Federal, State, and local regulatory agency inspections to review compliance with environmental laws and regulations. The Contractor will fully cooperate with any representative from any Federal, State or local regulatory agency who may visit the job site and will provide immediate notification to the Engineer, who will accompany them on any subsequent site inspections. The Contractor will complete, maintain, and make available to the Engineer, or regulatory agency personnel all documentation relating to environmental compliance under applicable Federal, State and local laws and regulations. The Contractor will immediately notify the Engineer if a Notice of Violation (NOV) is issued to the Contractor.

The Contractor will be responsible for all damages to persons or property resulting from Contractor fault or negligence as well as for the payment of any civil fines or penalties which may be assessed by any Federal, State or local regulatory agency as a result of the Contractor's or any subcontractor's violation of any applicable Federal, State or local environmental law or regulation. Should a Notice of Violation (NOV), Notice of Noncompliance (NON), Notice of Deficiency (NOD), or similar regulatory agency notice be issued to the Department as facility owner/operator on account of the actions or inactions of the Contractor or one of its subcontractors in the performance of work under this contract, the Contractor will fully cooperate with the Owner in defending against regulatory assessment of any civil fines or penalties arising out of such actions or inactions.

1.13 ENVIRONMENTAL PROTECTION PLAN

A. General
Prior to commencing construction activities or delivery of materials to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Engineer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the

Contractor must address during construction. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction tasks. Topics or issues which are not identified in this section, but which the Contractor considers necessary, shall be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the Contractor shall meet with the Engineer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

B. Compliance

No requirement in this Section shall be construed as relieving the Contractor from compliance with all permit requirements and all applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

C. Contents

1. The environmental protection plan shall include, but shall not be limited to, the following:

    a. Names of persons within the Contractor's organization who is (are) responsible for ensuring adherence to the Environmental Protection Plan.
    b. Names and qualifications of persons responsible for manifesting hazardous waste to be removed from the site, if applicable.
    c. Names and qualifications of persons responsible for training the Contractor's environmental protection personnel.
    d. Description of the Contractor's environmental protection personnel training program.
    e. Drawings showing locations of proposed temporary excavations or embankments for haul roads, lowlands crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on the site.
    f. Traffic control plans except for highway right-of-way including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Plan shall include measures to minimize the amount of soil transported onto paved public roads by vehicles or runoff.

g. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.

h. The Spill Control plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. This plan shall include as a minimum:

1.) The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Engineer, AERA and the local Fire Department in addition to the legally required Federal, State, and local reporting channels (including the National Response Center, 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.

2.) The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.

3.) Training requirements for Contractor's personnel and methods of accomplishing the training.

4.) A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

5.) The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.

6.) The methods and procedures to be used for expeditious contaminant cleanup.

i. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

j. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. A copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the

contaminant prevention plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.

k. A waste water management plan that identifies the methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines. If a settling/retention pond is required, the plan shall include the design of the pond including drawings, removal plan, and testing requirements for possible pollutants. If land application will be the method of disposal for the waste water, the plan shall include a sketch showing the location for land application along with a description of the pretreatment methods to be implemented. If surface discharge will be the method of disposal, a copy of the permit and associated documents shall be included as an attachment prior to discharging the waste water. If disposal is to a sanitary sewer, the plan shall include documentation that the Waste Water Treatment Plant Operator has approved the flow rate, volume, and type of discharge.

l. A historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on the project site: and/or identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be onsite or in the area are discovered during construction. The plan shall include methods to assure the protection of known or discovered resources and shall identify lines of communication between Contractor personnel and the Engineer.

1.14 CONFIRMATION TESTING FOR CONTAMINATED SEDIMENT REMOVAL

A. Contractor shall provide at no additional cost to the Owner an environmental consultant to test each of the contaminated material sites for the contaminants listed in the contract plans at that site. Testing shall be by accepted methods with an accredited laboratory. The test shall be conducted at five locations within each identified site: North, south, east and west extremity and center. Results shall be provided to the Engineer. Work as described in section 02300, “Earthwork/Dredging” is contingent on results of this testing data.

1.15 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

A. Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to

approval by the Engineer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Engineer determines that the proposed alternate method will have an adverse environmental impact.

1.16 NOTIFICATION

A. The Engineer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Engineer of the proposed corrective action and take such action when approved by the Engineer. The Engineer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Engineer may take under the contract.

PART 2 – PRODUCTS

Not used

PART 3 – EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

A. General

Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work. Confine construction activities to within the limits of the work indicated or specified.

B. Nest Sites

The Contractor shall protect and avoid all disturbances to the existing and new nest sites after acceptance of their construction by the engineer.

3.2 LAND RESOURCES

A. General

The Contractor shall confine all activities to areas defined by the drawings and specifications. Prior to the beginning of any construction, the Contractor shall identify any land resources to be preserved within the work area. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not

remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without approval. No ropes, cables, or guys shall be fastened to or attached to any existing landscape feature unless specifically authorized. The Contractor shall provide effective protection for land and vegetation resources at all times. Stone, soil, or other materials displaced into un-cleared areas shall be removed by the Contractor.

B. Work Area Limits

Prior to commencing construction activities, the Contractor shall mark the areas that need not be disturbed under this contract. Isolated areas within the general work area which are not to be disturbed shall be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, any markers shall be visible in the dark. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

C. Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. The Contractor shall restore landscape features damaged or destroyed during construction operations outside the limits of the approved work area.

D. Erosion and Sediment Controls

The Contractor shall be responsible for providing erosion and sediment control measures in accordance with permit requirements and Federal, State, and local laws and regulations. The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. The Contractor shall construct or install temporary and permanent erosion and sediment control best management practices (BMPs) as indicated on the drawings. BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences, construction of terraces, interceptor channels, sediment traps, inlet and outfall protection, diversion channels, and sedimentation basins. The Contractor's best management practices shall also be in accordance with the National Pollutant Discharge Elimination System (NPDES) Storm Water Pollution Prevention Plan (SWPPP). All temporary measures shall be removed after the area has been stabilized.

E. Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Engineer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Erosion and sediment controls shall be provided for on-site borrow and spoil areas to prevent sediment from entering nearby waters. Temporary excavation and embankments for plant or work areas shall be controlled to protect adjacent areas.

3.3 WATER RESOURCES

A. General

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwise indicated. All water areas affected by construction activities shall be monitored by the Contractor. For construction activities immediately adjacent to impaired surface waters, the Contractor shall be capable of quantifying sediment or pollutant loading to that surface water when required by State or federally issued Clean Water Act permits.

B. Cofferdams, Diversions, and Dewatering Operations

Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to maintain compliance with existing State water quality standards and designated uses of the surface water body. The Contractor shall comply with the State of California water quality standards and anti-degradation provisions and the Clean Water Act Section 40, NPDES General Permit No. 998001, Order No.R820030061 and the General Construction Activities NPDES Storm Water Permit.

C. Lowlands Crossings

Lowlands crossings shall allow movement of materials or equipment without violating water pollution control standards of the Federal, State, and local governments. Construction of stream crossing structures shall be in compliance with Clean Water Act Section 40, NPDES General Permit No. CA 998001, Order No.R820030061 and the General Construction Activities NPDES Storm Water Permit.

3.4 AIR RESOURCES

A. General

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.

B. Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from recycled materials processing equipment; shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. The Contractor must have sufficient, competent equipment available to accomplish these tasks. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs. The Contractor shall comply with all State and local visibility regulations.

C. Odors

Odors from construction activities shall be controlled at all times. The odors shall not cause a health hazard and shall be in compliance with State regulations and/or local ordinances.

D. Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise. The Contractor shall comply with the provisions of the State of California and local rules.

E. Burning

Burning is prohibited.

3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

A. General

Disposal of wastes shall be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

B. Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill shall be the minimum acceptable off-site solid waste disposal option. The Contractor shall verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate. The Contractor shall comply with Federal, State, and local laws and regulations pertaining to the use of landfill areas.

C. Chemicals and Chemical Wastes

Chemicals shall be dispensed ensuring no spillage to the ground or water. Periodic inspections of dispensing areas to identify leakage and initiate corrective action shall be performed and documented. This documentation will be periodically reviewed by the Owner. Chemical waste shall be collected in corrosion resistant, compatible containers. Collection drums shall be monitored and removed to a staging or storage area when contents are within 150 mm (6-inches) of the top. Wastes shall be classified, managed, stored, and disposed of in accordance with Federal, State, and local laws and regulations.

D. Contractor Generated Hazardous Wastes/Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. The Contractor shall, at a minimum, manage and store hazardous waste in compliance with 40 CFR 262 and shall manage and store hazardous waste in accordance with the approved hazardous waste management plan. The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing. The Contractor shall segregate hazardous waste from other materials and wastes, shall protect it from the weather by placing it in a safe covered location, and shall take precautionary measures such as construction of berms or other appropriate measures against accidental spillage. The Contractor shall be responsible for storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, State, and local laws and regulations. The Contractor shall transport Contractor generated hazardous waste off the work site property within 5 working days in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. The Contractor shall dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Engineer and the Owner. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility. The disposition of Contractor generated hazardous

waste and excess hazardous materials are the Contractor's responsibility. The Contractor shall coordinate the disposition of hazardous waste with the Engineer and the Owner.

E. Fuel and Lubricants

To the greatest extent practical, as determined by the Engineer, fueling, lubrication and servicing of vehicles and equipment shall be accomplished off site. When no other option is available and when approved by the Engineer, storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. There shall be no storage of fuel on the project site. Fuel must be brought to the project site each day that work is performed.

F. Waste Water

1. Disposal of waste water shall be as specified below.

a. Waste water from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, forms, and similar activities shall not be allowed to enter water ways or to be disposal prior to being treated to remove pollutants. The Contractor shall dispose of the construction related waste water off-site property in accordance with all Federal, State, Regional and Local laws and regulations.

b. For discharge of ground water, the Contractor shall follow all requirements of the project RWCQB Dewatering Permit and Construction and Construction Activities NPDES Storm Water Permit.

3.6 CONTROL AND DISPOSAL OF HAZARDOUS WASTES

A. Hazardous Waste/Debris Management

The Contractor will identify all construction activities which will generate hazardous waste/debris. The Contractor must provide a documented waste determination for all resultant waste streams. Hazardous waste/debris will be identified, labeled, handled, stored, and disposed of in accordance with all Federal, State, and local regulations including 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, and 40 CFR 268. Hazardous waste

will also be managed in accordance with the approved Hazardous Waste Management Section of the Environmental Protection Plan. Store hazardous wastes in approved containers in accordance with 49 CFR 173 and 49 CFR 178. No hazardous waste will be brought onto the site. Provide to the Engineer a copy of waste determination documentation for any solid waste streams that have any potential to be hazardous waste or contain any chemical constituents listed in 40 CFR 372-SUBPART D. For hazardous wastes spills, verbally notify the Engineer immediately.

B. Hazardous Waste Disposal

Controlled of stored waste, packaging, sampling, analysis, and disposal will b determined by the details in the contract. The requirements for jobs in the following paragraphs will be used as the guidelines for disposal of any hazardous waste generated.

1. Guidelines

a. The Contractor agrees to provide all Owner necessary for the final treatment/disposal of the hazardous material/waste in accordance with all local, State and Federal laws and regulations, and the terms and conditions of the contract within sixty (60) days after the materials have been generated. These Owners will include all necessary personnel, labor, transportation, packaging, detailed analysis (if required for disposal, and/or transportation, including manifesting or completing waste profile sheets, equipment, and the compilation of all documentation is required).

b. Contain all waste in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, 40 CFR 268, 40 CFR 270, 40 CFR 272, 40 CFR 273, 40 CFR 279, 40 CFR 280, and 40 CFR 761.

c. Control and turn in all hazardous waste requiring disposal.

d. Obtaining a representative sample of the material generated for each job done to provide waste stream determination.

e. Analyzing for each sample taken and providing analytical results to the Engineer. Provide two copies of the results.

f. Determine the DOT proper shipping names for all waste (each container requiring disposal) and will demonstrate how this determination is developed and supported by the sampling and analysis requirements contained herein to the Engineer for review.

g. Department Responsibilities

To review all documentation submitted by the Contractor for accuracy. Provide guidance to the Contractor in reference to environmental compliance.

h. Interim Waste Generation Site for Contractor Disposal of WHM/HW

The Contractor shall request an area suitable for packaging WHN/HW requiring disposal.

i. Contractor Disposal Turn-In Requirements

For any waste hazardous materials or hazardous waste generated which requires the Contractor disposal, the controlling regulations must be followed.

j. All material must meet the following conditions in order to be acceptable for disposal

1.) Drums compatible with waste contents and drums meet DOT requirements for 49 CFR 173 for transportation of materials.

2.) Drums banded to wooden pallets. No more than three (3) 210 liter (55 gallon) drums to a pallet, or two (2) 320 liter (85 gallon) over packs.

3.) Band using 1-1/4 inch minimum band on upper third of drum.

4.) Recovery materials label (provided by Code 106.321) located in middle of drum, filled out to indicate actual volume of material, name of material manufacturer, other vendor information as available.

5.) Always have 75 mm to 125 mm (3 to 5 inches) of empty space above volume of material. This space is called 'outage'.

k. Contractor's Representative shall:

1.) Contain all waste in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, 40 CFR 268, 40 CFR 270, 40 CFR 271, 40 CFR 272, 40 CFR 273, 40 CFR 279, 40 CFR 280, and 40 CFR 716.

2.) Control and turn-in all hazardous waste requiring disposal.

3.) Providing identification of material requiring disposal to permit safe opening, storage and handling by the Department.

C. Pollution Prevention/Hazardous Waste Minimization

The Contractor will actively pursue minimizing the use of hazardous materials and the generation of hazardous waste while on-base. The Hazardous Waste Management Section of the Environmental Protection Plan will include the Contractor's procedures for pollution prevention/ hazardous waste minimization. For preparing this part of the plan, the Contractor may consult the activity Environmental Office for suggestions and to obtain a copy of the installation's pollution prevention/hazardous waste minimization plan for reference material. If no written plan exists, the Contractor may obtain information by contacting the Engineer. The Contractor will describe the types of the hazardous materials expected to be used in the construction when requesting information.

D. Hazardous Material Control

The Contractor will include hazardous material control procedures in the Safety Plan. The procedures will address and ensure the proper handling of hazardous materials, including the appropriate transportation requirements. The Contractor will submit a MSDS and estimated quantities to be used for each hazardous material to the Engineer prior to bringing the material on base. Typical materials requiring MSDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, and petroleum products. At the end of the project, the Contractor will provide the Engineer with the maximum quantity of each material that was present at the site at any one time, the dates the material was present, the amount of each material that was used during the project, and how the material was used. The Contractor will also ensure that hazardous materials are utilized in a manner that will minimize the amount of hazardous waste that is generated. The Contractor will ensure that all containers of hazardous materials have NFPA labels or their equivalent. Copies of the MSDS for hazardous materials will be kept on site at all times and provided to the Engineer at the end of the project. The Contractor will certify that all hazardous materials removed from the site are hazardous materials and do not meet the definition of hazardous waste per 40 CFR 261.

E. Petroleum Products

Conduct the fueling and lubricating of equipment and motor vehicles off-site to the maximum extent practical. When maintenance must be done on site it shall be in a manner that protects against spills and evaporation. There shall be no fueling, lubrication, or maintenance of construction equipment within 150 m (500 feet) of inner Bolsa Bay or the EGGW Channel. All used oil generated on site will be managed in accordance with 40 CFR 279. The Contractor will determine if any used oil generated while on-site exhibits a characteristic of hazardous waste. In addition, used oil containing 1000 parts per million of solvents will be considered a hazardous waste and disposed of at Contractor's expense. Used oil mixed with a hazardous waste will also be considered a hazardous waste. All hazardous waste will be managed in accordance with the paragraph entitled Hazardous Waste or Debris Management of this section and will be managed in accordance with the approved Environmental Protection Plan.

F. Releases or Spills of Oil and Hazardous Substances

1. Take precautions to prevent releases/spills of oil and hazardous substances. In the event of any releases of oil and hazardous substances, chemicals, or gases; immediately (within 15 minutes) notify AERA, California State Lands Commission, and the Engineer. The Contractor is responsible for verbal and written notifications as required by the federal 40 CFR 355, State and local regulations. Spill response will be in accordance with 40 CFR 300 and applicable State and local regulations. Contain and clean up these spills without cost to the Owner. If Owner assistance is requested or required, the Contractor will reimburse the Owner for such assistance. Provide copies of the written notification and documentation that a verbal notification was made within 20 days.

2. The Contractor shall notify the Engineer immediately upon discovery of any spill. The contractor shall maintain spill cleanup equipment and materials at the work site. The Contractor shall clean up all hazardous and non-hazardous (WHM) waste spills caused by the Contractor. The Contractor shall reimburse the Owner for all material, equipment, and clothing generated during any spill cleanup. The Contractor shall reimburse the Owner for all costs incurred including sample analysis materials, equipment, and labor if the Owner must initiate its own spill cleanup procedures, for Contractor responsible spills, when:

   a. The Contractor has not begun spill cleanup procedure within one (1) hour of spill discovery/occurrence, or

b. If, in the Engineer's judgment, the Contractor's spill cleanup is not adequately abating life threatening situation and/or is a threat to any body of water or environmentally sensitive areas.

3.7 DUST CONTROL

A. Keep dust suppressed at all times, including during nonworking periods. Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations. Dry power broom cleaning will not be permitted. Instead, use wet sweeping, or wet power broom cleaning. Air blowing will not be permitted.

3.8 NOISE

A. Make the maximum use of low-noise emission products, as certified by the EPA. Use of explosives will not be permitted. Confine pile-driving operations to the period between 7 a.m. and 8 p.m., Monday through Saturday, exclusive of holidays, unless otherwise specified.

3.9 MERCURY MATERIALS

A. Mercury is prohibited in the construction of this facility, unless specified otherwise, and with the exception of mercury vapor lamps and fluorescent lamps. Dumping of mercury-containing materials and devices such as mercury vapor lamps, fluorescent lamps, and mercury switches, in rubbish containers is prohibited. Remove without breaking, pack to prevent breakage, and transport off-site in an unbroken condition for disposal as directed. Immediately report to the Engineer instances of breakage or mercury spillage. Clean mercury spill area to the satisfaction of the Engineer.

3.10 PREVIOUSLY USED EQUIPMENT

A. The Contractor shall clean all previously used construction equipment prior to bringing it onto the project site. The Contractor shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. The Contractor shall consult with the USDA jurisdictional office for additional cleaning requirements.

3.11 MAINTENANCE OF POLLUTION FACILITIES

A. The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.12 TRAINING OF CONTRACTOR PERSONNEL

A. The Contractor's personnel shall be trained in all phases of environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

3.13 POST CONSTRUCTION CLEANUP

A. The Contractor shall clean up all areas used for construction as directed by the Engineer. The Contractor shall, unless otherwise instructed in writing by the Engineer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled and the entire area seeded unless otherwise indicated.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. The work of this Section is included in other Sections of work and is therefore not measured individually.

4.2 PAYMENT

A. Full compensation for providing all the labor, materials, tools, equipment and incidentals and for doing all the work involved in this Section will be considered as included in the prices bid for the various related items of work and no separate payment will be made therefor.

END OF SECTION

PART 1 - GENERAL

1.1. WORK INCUDED

A. The work of this section consists, in general, of conforming to the requirements specified.

1.2 SUBMITTALS

A. The following shall be submitted in accordance with Section 01330, Submittal Procedures":

1. Closeout Submittals
2. As-built drawings
3. Certification of EPA Designated Items

1.3 PROJECT RECORD DOCUMENTS

A. As-Built Drawings

Project Record Documents consist of furnishing a set of Record Documents showing changes made to the project and representing an "As-Built" set of Drawings. Upon completion and prior to acceptance of the work, Contractor shall submit a set of final Record Documents to the Engineer. Record Documents include, but are not limited to, Drawings and Specifications.

1.4 CLEANUP

A. Sweep paved areas and rake clean landscaped areas. Remove waste and surplus materials, rubbish and construction facilities from the site.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. The work of this Section is included in other Sections of work and is therefore not measured individually.

4.2 PAYMENT

A. Full compensation for providing all the labor, materials, tools, equipment and incidentals and for doing all the work involved in this Section will be considered as included in the prices bid for the various related items of work and no separate payment will be made therefor.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The work of this section includes, in general, the providing of all labor, materials, tools, equipment and incidentals and doing all work as may be necessary to provide earthwork and dredging; including excavation, dredging, transporting, placement measuring, filling, and final grading.

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01330, "Submittal Procedures."
Dredging Plan

Submit procedures for accomplishing this dredging work. Provide detailed description of all equipment proposed for use in the dredging and beach placement operations, including ingress/egress, safety measures, public safety measures on the beach, means of removal, transporting, and placement.

1.3 CRITERIA FOR BIDDING

A. Base bids on the following criteria:
1. Dredged material quantity 230,000 m^3 (~300,000 yd^3).
2. Surface elevations are as indicated.
3. Pipes or other artificial obstructions, except those indicated, will not be encountered.

1.4 MATERIALS TO BE REMOVED

A materials testing report has been prepared for the project and is available in the Appendices.

1.5 PERMITS

The Contractor shall comply with conditions and requirements of the Corps of Engineers Permit and other State, Park, City and Federal permits. The Engineer will secure the permits for dredging and disposal of material as indicated. Ingress/egress and public safety requirements are of particular interest for this project. Air quality permits shall be obtained by the contractor. The point of contract for this region is: South Coast Air Quality Management District, Merill Hickman, 21865 Copley Drive, Diamond Bar, CA, phone (909) 396-2000.

1.8 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain during the life of the contract, environmental protective measures. Also, provide environmental protective measures required to correct conditions, such as oil spills or debris that occur during the earthwork and dredging operations. All debris to be disposed of off-site. Comply with Federal, State, and local regulations pertaining to water, air, and noise pollution.

1.9 NOTICE TO PROCEED (NTP)

The Notice to Proceed is expected to be issued by October 15, 2008. It shall be the responsibility of the Contractor to complete the dredging plan schedule, and preconstruction hydrographic survey within 21 calendar days of Notice To Proceed, and to begin dredging within 60 calendar days of Notice To Proceed.

PART 2 - EXECUTION

2.1 DREDGING AND FILL OPERATIONS

A. General

1. Underground Utilities
   There are no known underground utilities in the dredging footprint. The Contractor shall physically verify the location and elevation of any existing utilities indicated prior to starting construction.
2. Machinery and Equipment
   Movement of construction machinery and equipment over pipes during construction shall be at the Contractor's risk. Repair, or remove and provide new pipe for existing or newly installed pipe that has been displaced or damaged.

B. Dredging

1. General
   Dredge to contours, elevation, and dimensions indicated on the Plans. Place excavated materials on the beach south of the inlet at the intended location per the Plans.
2. Tolerances
   A tolerance of 0.30 meter above the prescribed dredging depth will be allowed in the dredging. There is no paid overdepth dredging allowance.
3. Side Slopes
   Dredging on side slopes shall follow, as closely as practicable, the lines indicated or specified. A 0.3 meter allowance, above will be made for dredging beyond the indicated or specified side slopes.
4. Basis for Bids
   Base bids on an estimated quantity of 230,000 m^3 (~300,000 yd^3) and provide a unit price for dredging/placement above or below this quantity. Should the total quantity of earthwork/dredging vary from that specified

by more than 20% from this basis for bidding, the contract price can be adjusted. The earthwork/dredging conditions specified and indicated describe conditions which are known. However, the Contractor is responsible for other conditions encountered which are not unusual when compared to the conditions recognized in the earthwork/dredging business as usual in earthwork/dredging activities such as those required under this contract.

Payment will be at the contract unit price per cubic meter, multiplied by total cubic meters of acceptable dredging based on pre- and post-construction surveys of each dredging zone to be performed by an independent survey hired by the contractor and witnessed by the Owner. Base bids on total cubic meters as specified in the proposal. If the Engineer requires an increase or a decrease in total volume of earthwork/dredging, the contract price may be adjusted.

5. Inspection

Inspect the work, keep records of work performed, and ensure that gages, targets, ranges, and other markers are in place and usable for the intended purpose. Furnish, at the request of the Engineer, boats, boatmen, laborers, and materials necessary for inspecting and surveying the work. When required, provide transportation for the Engineer and inspectors to and from the disposal area and between the dredging plant and adjacent points on shore.

6. Plant

Maintain the plant, barges, pipelines, and associated equipment to meet the requirements of the work. Promptly repair leaks or breaks along pipelines. Remove dredged material placed outside limits due to leaks and breaks at the Contractors expense.

7. Method of Communication

Provide a system of communication between the dredge crew and the crew at the disposal area. A portable two-way radio is acceptable.

8. Salvaged Material

Articles of value, which are brought to the surface during dredging operations, shall remain or become the property of the Owner and shall initially be deposited on shore at a convenient location near the site of the work, as directed.

9. Safety of Structures

The prosecution of work shall ensure the stability of structures lying on or adjacent to the site of the work, insofar as structures may be jeopardized by dredging operations. Repair damage resulting from dredging operations, insofar as such damage may be caused by variation in locations or depth of dredging, or both, from that indicated or permitted under the contract. Anchoring, spudding, or attaching to the bridges, piles or abutments will not be allowed.

10. Plant Removal

Upon completion of the work, promptly remove plant, including ranges, buoys, piles, and other markers or obstructions.

11. Turbidity Monitoring

Contractor shall provide turbidity monitoring in accordance with requirements of the California Water Quality Control Board permit provided in Appendix E.

C. Beach Fill Placement

1. General

Fill and backfill to contours, elevations, and dimensions indicated. The existing beach contours are variable. The intent of the placement is to extend the existing berm seaward by the distance indicated on the Plans, and along the beach for a distance sufficient to accommodate the dredged volume. The fill will be placed hydraulically and mechanically manipulated to achieve the final grading.

2. Tolerances

A tolerance of 0.5 meters below the prescribed grade will be allowed in the beach placement. A tolerance of +/- 3 meters shall be allowed for the width of the top of the beach crest.

3. Staking

The contractor shall place and maintain grading stakes with clearly marked target elevations and tolerances on the beach until each section has been accepted by the Engineer.

4. Public Access

The contractor shall maintain public access to the beach during operations and shall provide sand walk-over ramps across the placement pipes at intervals not to exceed 25 meters.

E. Measurement

1. Actions

a. The Contractor will retain and independent licensed hydrographic surveyor to provide all pre-, post- and acceptance surveys. Monthly progress survey will be made by the Contractor. The Engineer reserves the right to witness all surveys and Contractor shall give at least 5 days notice of survey activities.

b. Surveys/Soundings

(1) A mandatory pre-survey conference shall be held to discuss all aspects of the Contractor’s survey plan including: control, equipment, procedures, safety plan, QC program, excavation control, dredging control, calibration, schedule, excavation/dredging limits, and deliverables.

(2) The material removed will be measured by cubic meter in place, by means of soundings taken before and after excavation/dredging. Surveys/soundings will be taken by

either, trigonometric leveling (total station)/differential leveling, Differential Global Positioning System (DGPS), 200 kHz single-beam acoustic methods, acoustic multi-beam swath methods, or in combination, as determined by the Engineer; results of surveys/soundings by any of these methods, singularly or in combination, will be the basis for payment.

(3) The Contractor's hydrographic surveys for progress payment shall meet or exceed the survey standards listed in the U.S. Army Corps of Engineers EM 1110-2-1003 (Hydrographic Surveying) for Class I surveys. Surveys shall be in the World Geodetic System of 1984 (WGS84), High Precision Geodetic Network (HPGN), meters, and be performed by a hydrographic survey contractor with at least three (3) years of experience in hydrographic surveying and have either a current Land Surveyor's or a Professional Engineer's license, authorized to certify surveys in the State of California. The Hydrographic Surveyor firm selected by the Contractor must be approved by the Engineer prior to performing surveys for this contract.

(5) Hydrographic surveys shall be conducted using an Automated Range-Azimuth Positioning System or Differential Global Positioning System (DGPS) with positional accuracy to Class I surveys or better that is linked to an automated (digital) depth recording device capable of continuous logging of x,y,z positional data with depth measurement resolution to the nearest 3/100 of a meter. Digital depths shall be supplemented by analog depth records if survey is performed by single beam echosounder. Sounding lines shall be verified by crosslines at least 10 percent of the principal sounding lines. Distance between successive soundings (sounding interval) shall be no more than 3 meters. Soundings shall be reduced to sounding datum (NAVD 88) by using actual tides and other appropriate corrections resulting in an accuracy to meet or exceed Class I survey standard.

(6) The Contractor shall submit a Tide gage plan for approval by the Engineer. The plan shall include the types of gages to be deployed and the locations. All tide gages shall be referenced to the vertical datum as shown on the plans.

2. Method of Measurement

The total amount of dredged material will be measured by computing the volume between the bottom surface shown by the surveys and/or

soundings of the pre-dredge survey, and the bottom surface shown by the soundings of the post-dredge survey within the dredging limits for each of the four dredge payment sections. The drawings represent existing conditions based on current available information, but will be verified and corrected, if necessary, by surveys or soundings taken before dredging in each locality. The Triangulated Irregular Networks (TIN) made from post-processed survey soundings, representing the pre-dredge and post-dredge dredging conditions, will be used for quantity determination. The dredging limits shall be subtracted from the TINs, and the pre-dredge difference minus the post-dredge difference will represent the quantity dredged. Misplaced materials (including any required removal and placement), materials placed in temporary stockpiles, and excessive dredging beyond the limits and tolerances indicated on the plans will be excluded from the quantities for which payment will be made.

3. Surveys During Progress of Work

Contract depth will be determined by soundings or sweepings taken behind the dredge as work progresses. The Contractor shall take progress soundings or sweepings on a weekly basis and provide the resulting data to the Engineer. The Contractor's survey shall provide full coverage of an entire area for which progress payment is being submitted. Contractor's hydrographic surveys shall be performed electronically (automated) and the data shall be provided and submitted to the Engineer on an electronic media (IBM compatible, ASCII format) in delimited files of easting, northing, and depth (x,y,z). Three copies of the plot of the soundings will accompany the x,y,z data and all data shall be collected and plotted in metric units.

4. Monthly Estimates

Monthly estimates of work completed will be based on the result of surveys made during the progress of the work. Deductions will be made for excavation/dredging not in accordance with the specifications.

G. Final Examination and Acceptance

As soon as practicable after the completion of payment zones, which in the opinion of the Engineer, will not be affected by further dredging operations, each zone will be surveyed by the independent surveyor. The Contractor will remove shoals and lumps by dragging the bottom or by dredging as directed by the Engineer. However, if the bottom is soft removal may be waived at the discretion of the Engineer. The Engineer will be notified when soundings or sweepings are to be made and will be permitted to accompany the sounding or sweeping party and to inspect the data and methods used in preparing the final estimate. When areas are found to be in a satisfactory condition, the work therein will be accepted as complete. Final estimates will be subject to deductions or correction of

deductions previously made because of excessive overdepth, earthwork/dredging outside or authorized areas, or disposal of material in an unauthorized manner.

After completion of the dredging and beach nourishment work, the contractor shall provide 4 copies of reproducible "As Built" drawings of the dredging and beach nourishment areas showing all spot elevations, controls, 0.5m contour lines and existing features. Drawings should be scaled to an appropriate size and referenced to NAVD88 in meters.

PART 3 - MEASUREMENT AND PAYMENT

3.1 MEASUREMENT

A. Measurement

Quantities of Dredging shall be based on the amounts of material removed and subsequently transported to and placed on the beach. These quantities shall be determined by comparing pre-removal surveys and post removal surveys and calculating the actual volumes of each material type that has been excavated and/or dredged to the pay depth. There will be no payment for material dredged below the pay depth.

3.2 PAYMENT

B. Payment

Payment for Earthwork/Dredging shall include removal, transportation and placement to the lines and grades shown on the Drawings.

1. Payment for excavation of Beach Sand, transportation to the designated beach sites, filling, and grading as may be needed to complete the beach configurations shown, will be paid at the unit price bid for Dredging and Placement in the Proposal and Bid.

END OF SECTION